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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	9	Application Number	10/681,577
		Filing Date	October 7, 2003
		First Named Inventor	Christopher J. Diorio
		Art Unit	2816
		Examiner Name	Hai L. Nguyen
		Attorney Docket Number	IMPJ-0004

**ENCLOSURES (check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
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**Remarks****SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

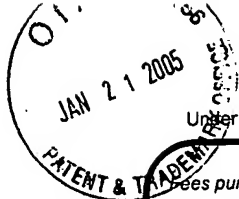
Firm	THELEN REID & PRIEST LLP		
Signature			
Printed Name	David B. Ritchie		
Date	1-18-2005	Reg. No.	31,562

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
Typed or printed name	Beatrice Orozco	Date	1/19/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



<b>FEE TRANSMITTAL for FY 2005</b>		<b>Effective on 12/08/2004.</b> Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).		
		<b>Complete if Known</b>		
		Application Number	10/681,577	
		Filing Date	October 7, 2003	
		First Named Inventor	Christopher J. Diorio	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Examiner Name	Hai L. Nguyen	
TOTAL AMOUNT OF PAYMENT (\$)		180.00	Art Unit	2816
			Attorney Docket No.	IMPJ-0004

**METHOD OF PAYMENT** (check all that apply)

☒ Check   ☐ Credit Card   ☐ Money Order   ☐ None   ☐ Other (please identify) : \_\_\_\_\_

☐ Deposit Account   Deposit Account Number: 50-1698   Deposit Account Name: Thelen Reid & Priest LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below   ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s)   ☒ Credit any overpayments

Under 37 CFR 1.16 and 1.17

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**FEE CALCULATION**

**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

**2. EXCESS CLAIM FEES**

Fee Description	Small Entity Fee (\$)	Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 30 (including Reissues)	200	100
Multiple dependent claims	360	180

**Total Claims**   **Extra Claims**   **Fee (\$)**   **Fee Paid (\$)**

\_\_\_\_\_ -20 or HP= \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

HP = highest number of total claims paid for, if greater than 20.

**Indep. Claims**   **Extra Claims**   **Fee (\$)**   **Fee Paid (\$)**

\_\_\_\_\_ - 3 or HP= \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____	_____	_____	_____	_____
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x				_____

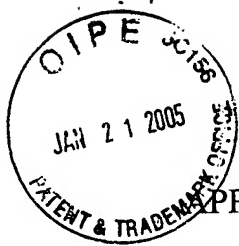
**4. OTHER FEE(S)**

	Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)	_____
Other (e.g., late filing surcharge) : (1806) <u>Information Disclosure Statement, \$180 fee</u>	180.00

<b>SUBMITTED BY</b>			
Signature		Registration No. (Attorney/Agent)	31,562
Name (Print/Type)	David B. Ritchie	Telephone	(408) 292-5800
		Date	1-18-2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**APPLICANT:** Christopher J. Diorio et al.

**SERIAL NO.:** 10/681,577

**FILING DATE:** October 7, 2003

**TITLE:** Use of Analog-Valued Floating-Gate Transistors to Match the Electrical Characteristics of Interleaved and Pipelined Circuits

**EXAMINER:** Hai L. Nguyen

**TELEPHONE:** (571) 272-1747

**FAX:** (703) 872-9306

**ART UNIT:** 2816

**CERTIFICATE OF MAILING**

I hereby certify that this paper is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: MAIL STOP: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date printed below:

Date:

1/19/2005

Name:

Beatrice Orozco

Beatrice Orozco

**MAIL STOP: AMENDMENT  
COMMISSIONER FOR PATENTS  
P.O. Box 1450  
ALEXANDRIA, VA 22313-1450**

**INFORMATION DISCLOSURE STATEMENT**

Each item of information listed in the attached FORM PTO-1449, for which a copy of each is attached (unless the blanket waiver referred to below applies), may be material to the examination of the above-identified application and is, therefore, submitted in compliance with the duty of disclosure defined in 37 CFR §§ 1.56, 1.97 and 1.98. The Examiner is requested to review, consider and document each such item in the official record of this application.

Note: If this box ☒ is checked, this case was filed after June 30, 2003 and qualifies for the blanket waiver of deposit of copies of U.S. Patents and U.S. Patent Application Publications in accordance with the written waiver of 37 CFR §1.98 (a)(2)(i) dated July 11, 2003. Accordingly, such copies are not attached.

This Information Disclosure Statement under 37 CFR §§ 1.56, 1.97 and 1.98 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these items constitutes prior art.

# I

This statement is filed pursuant to (**CHECK ONE BOX**):

☐

**37 C.F.R. § 1.97(b).**

This information disclosure statement is filed either:

- (1) within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
- (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application;
- (3) before the mailing date of a first office action on the merits; or
- (4) before the mailing of a first office action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114, **whichever event occurs last.**

**Accordingly, this information disclosure statement requires no fee and no certification.**

☒

**37 C.F.R. § 1.97(c).**

This information disclosure statement is filed **after** the period specified in 37 C.F.R. § 1.97(b), but **before** the mailing date of any of the following:

- (1) a final action under 37 C.F.R. § 1.113;
- (2) a notice of allowance under 37 C.F.R. § 1.311; or
- (3) an action that otherwise closes prosecution in the application.

**Accordingly, this information disclosure statement requires either:**

- (1) the fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c); or
- (2) a certification according to 37 C.F.R. § 1.97 (e)(1) or (2).

☐ **37 C.F.R. § 1.97(d).**

This information disclosure statement is filed **after** the period specified in 37 C.F.R. § 1.97 (c).

Accordingly, this information disclosure statement requires:

- (1) a certification in accordance with 37 C.F.R. § 1.97(e); **and**
- (2) the fee specified in 37 C.F.R. § 1.17 (p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d).

If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. § 1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record. **To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.**

**II**

**Fees Due (CHECK ONE BOX):**

- ☐ No fee is due.
- ☒ The fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) or 37 C.F.R. § 1.97(d) is enclosed (**\$180**).

**III**

**Certification (CHECK ONE BOX):**

- ☒ No certification is necessary.
- ☐ Pursuant to 37 C.F.R. § 1.97(e)(1), the undersigned hereby certifies:  
That each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- ☐ Pursuant to 37 C.F.R. § 1.97(e)(2), the undersigned hereby certifies:  
No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this information disclosure statement.


IV

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

**Please charge any additional required fee or credit any overpayment to our deposit account number 50-1698.**

Respectfully submitted,  
THELEN REID & PRIEST LLP

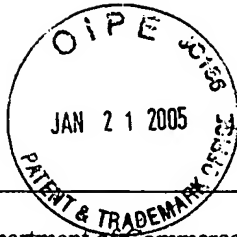
Dated: January 18, 2005

  
\_\_\_\_\_  
David B. Ritchie  
Reg. No. 31,562

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Fax: (408) 287-8040



Form PTO 1449 (Rev. 2-32) U.S. Department of Commerce Patent and Trademark Office				Atty. Docket No. IMPJ-0004		Serial No.: 10/681,577	
<b>Information Disclosure Statement by Applicant</b>				Applicant: Christopher J. Diorio et al.			
(Use several sheets if necessary)				Filed: October 7, 2003 Group: 2816			
<b>U.S. Patent Documents</b>							
Init.		Document No.	Date	Name	Class	Subclass	Filing Date
	A	2002/0089440	7/11/2002	Kranz et al.			
	B	3,958,236	5/18/1976	Kelly			
	C	4,163,947	8/7/1979	Weedon			
	D	4,914,440	4/3/1990	Ramet			
	E	5,029,063	7/2/1991	Lingstaedt			
	F	5,099,156	3/24/1992	Delbruck			
	G	5,243,347	9/7/1993	Jackson et al.			
	H	5,332,997	7/26/1994	Dingwall et al.			
	I	5,376,935	12/27/1994	Seligson			
	J	5,553,030	9/3/1996	Tedrow et al.			
	K	5,608,400	3/4/1997	Pellon			
	L	5,666,118	9/9/1997	Gersbach			
	M	5,710,563	1/20/1998	Vu et al.			
	N	5,790,060	8/4/1998	Tesch			
	O	5,825,317	10/20/1998	Anderson et al.			
<b>Foreign Documents</b>							
Init.		Document No.	Date	Country	Class	Subclass	Translation Yes No
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
	P	Bastos, et al., "A 12-bit Intrinsic Accuracy High-Speed CMOS DAC", IEEE Journal of Solid-State Circuits, Vol. 33, No. 12, December 1998, pp. 1959-1969.					
	Q	Bugeja, et al., "A Self-Trimming 14-b 100-MS/s CMOS DAC", IEEE Journal of Solid-State Circuits, Vol. 35, No. 12, December 2000, pp. 1841-1852.					
	R	Bugeja, et al., "A 14-b, 100-MS/s CMOS DAC Designed for Spectral Performance", IEEE Journal of Solid-State Circuits, Vol. 34, No. 12, December 1999, pp. 1719-1732.					
	S	Diorio, et al., "A High-Resolution Non-Volatile Analog Memory Cell", IEEE, 1995, pp. 2233-2236.					
	T	Diorio, "A p-Channel MOS Synapse Transistor with Self-Convergent Memory Writes", IEEE Transaction On Electron Devices, Vol. 47, No. 2, pp. 464-472, February 2000.					
	U	SGS-Thomson Microelectronics, "An Overview of the Serial Digital Interface", 1994, pp. 1-28.					
Examiner					Date Considered		
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.							



Form PTO 1449 (Rev. 2-32) U.S. Department of Commerce Patent and Trademark Office				Atty. Docket No. IMPJ-0004		Serial No.: 10/681,577	
<b>Information Disclosure Statement by Applicant</b>				Applicant: Christopher J. Diorio et al.			
(Use several sheets if necessary)				Filed: October 7, 2003 Group: 2816			
<b>U.S. Patent Documents</b>							
Init.		Document No.	Date	Name	Class	Subclass	Filing Date
	V	5,841,384	11/24/1998	Herman et al.			
	W	5,870,044	2/9/1999	Dell'ova et al.			
	X	5,870,048	2/9/1999	Kuo et al.			
	Y	5,914,894	6/22/1999	Diorio et al.			
	Z	5,917,440	6/29/1999	Khoury			
	AA	5,952,946	9/14/1999	Kramer et al.			
	AB	5,955,980	9/21/1999	Hanna			
	AC	5,982,313	11/9/1999	Brooks et al.			
	AD	5,982,315	11/9/1999	Bazarjani et al.			
	AE	6,118,398	9/12/2000	Fisher et al.			
	AF	6,130,632	10/10/2000	Opris			
	AG	6,137,431	10/24/2000	Lee et al.			
	AH	6,169,503	1/2/2001	Wong			
	AI	6,172,631	1/9/2001	Tsai et al.			
	AJ	6,191,715	2/20/2001	Fowers			
	AK	6,266,362	7/24/2001	Tuttle et al.			
<b>Foreign Documents</b>							
							<b>Translation</b>
Init.		Document No.	Date	Country	Class	Subclass	Yes No
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
	AL	Tille, et al., "A 1.8-V MOSFET-Only $\Sigma \Delta$ Modulator Using Substrate Biased Depletion-Mode MOS Capacitors in Series Compensation", IEEE, Journal of Solid-State Circuits, Vol. 36, No. 7, July 2001, pp. 1041-1046.					
	AM	Tsividis, et al., "Continuous-Time MOSFET-C Filters in VLSI", IEEE Transactions on Circuits and Systems, Vol. CAS-33, No. 2, February 1986, pp. 125-140.					
	AN	Van der Plas, et al., "A 14-bit Intrinsic Accuracy $Q^2$ Random Walk CMOS DAC", IEEE Journal of Solid-State Circuits, Vol. 34, No. 12, December 1999, pp. 1708-1718.					
	AO	Vittoz, "Dynamic Analog Techniques", Design of MOS VLSI Circuits for Telecommunications, 1985, pp. 145-170.					
	AP	Vittoz, "Dynamic Analog Techniques", Design of Analog-Digital VLSI Circuits for Telecommunications and Signal Processing, Chapter 4, 1994, pp. 97-124.					
	AQ	Vittoz, "Continuous-Time Filters", Design of Analog-Digital VLSI Circuits for Telecommunications and Signal Processing, Chapter 6, 1994, pp. 177-211.					
Examiner					Date Considered		
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.							



Form PTO 1449 (Rev. 2-32)				U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. IMPJ-0004		Serial No.: 10/681,577	
<b>Information Disclosure Statement by Applicant</b>						Applicant: Christopher J. Diorio et al.			
(Use several sheets if necessary)						Filed: October 7, 2003 Group: 2816			
<b>U.S. Patent Documents</b>									
Init.		Document No.	Date	Name	Class	Subclass	Filing Date		
	AR	6,317,066	11/13/2001	Chiang					
	AS	6,373,417	4/16/2002	Melanson					
	AT	6,373,418	4/16/2002	Abbey					
	AU	6,424,279	7/23/2002	Kim et al.					
	AV	6,496,128	12/17/2002	Wiesbauer et al.					
	AW	6,522,275	2/18/2003	May					
	AX	6,570,518	5/27/2003	Riley et al.					
	AY	6,573,853	6/3/2003	Mulder					
<b>Foreign Documents</b>									
Init.		Document No.	Date	Country	Class	Subclass	Translation		
							Yes	No	
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>									
	AZ	Vittoz, "Analog-Digital Conversion Techniques for Telecommunications Applications", Design of Analog-Digital VLSI Circuits for Telecommunications and Signal Processing, Chapter 9, 1994, pp. 289-315.							
	BA	Vittoz, "Delta-Sigma Data Converters", Design of Analog-Digital VLSI Circuits for Telecommunications and Signal Processing, Chapter 10, 1994, pp. 317-339.							
Examiner					Date Considered				
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.									